



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/774,013 | 01/31/2001 | Fumihiko Sonoda | Q62082 | 2278 |

7590 09/20/2005

SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
WASHINGTON, DC 20037-3213

| |
|----------|
| EXAMINER |
|----------|

EDWARDS, PATRICK L

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2621

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------|----------------------------------|--|
| Office Action Summary | Application No. 09/774,013 | Applicant(s) SONODA, FUMIHIRO | |
| | Examiner Patrick L. Edwards | Art Unit 2621 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2621

DETAILED ACTION

1. The response received on 06-17-2005 has been placed in the file and was considered by the examiner. An action on the merits follows.

Response to Arguments

2. The arguments filed on 06-17-2005 have been fully considered. A response to these arguments is provided below.

Prior Art Rejections

Summary of Argument:

1. Applicant alleges that Stavely fails to teach the limitations of “blemish elimination processing on said defective image while reading photoelectrically said image.” Specifically, applicant argues that Stavely is directed to “image processing” but is not directed to “blemish elimination processing.”
2. Applicant alleges that the “image processing of Stavely is not performed on the defective image.” Applicant argues that the image processing is instead performed “on the actual image.” (see remarks pg. 7).
3. Applicant alleges that the examiner has cited the same part of the Stavely reference to teach two separate and distinct limitations. (see remarks pg. 8)

Examiner's Response:

1. Applicant's arguments are unpersuasive. The arguments presented by applicant at pg. 7 of the remarks do not present the claim limitation in its full context and are therefore misleading. Column 5 lines 60-65 of Stavely was cited in the previous office action for the limitation of “performing preprocessing for the blemish elimination processing on said defective image.” Applicant has presented no arguments to the effect that Stavely does not teach this preprocessing operation.
2. Applicant's arguments are unpersuasive. Stavely unambiguously discloses that image processing techniques are used to limit image correction to large features and to ignore small scattered points of low intensity and noise *in the infrared scan* (i.e. the defective image). Applicant is respectfully invited to refer back to the cited 5-line passage from the previous office action where this is expressly stated. Specifically, applicant is respectfully urged to pay special attention to the phrase “in the infrared scan.”
3. Applicant's arguments are unpersuasive. The examiner has cited two separate and distinct passages of the reference for these two separate and distinct limitations.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2621

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being anticipated by Stavely et al. (USPN 5,969,372) in view of Yajima et al. (USPN 4,074,231).

With regard to claim 1, which is representative of claim 7, Stavely discloses reading a defective image as information related to a defect on the film (Stavely col. 2 lines 31-34).

Stavely further discloses reading the defective image before reading the actual image (Stavely col. 4 lines 21-25).

Stavely further discloses performing preprocessing for the blemish elimination processing on the the defective image (Stavely col. 5 lines 60-65).

Stavely further discloses performing blemish elimination processing on a blemish of the actual image, based on the defective image subjected to preprocessing (Stavely col. 4 lines 19-24).

With regard to the added limitation that preprocessing comprises edge enhancement processing, Stavely discloses preprocessing the infrared scan with known image processing techniques such as area size thresholding, feature clustering, edge detection and boundary following, and region extraction methods (Stavely col. 5 lines 60-65). Stavely, however, fails to expressly disclose enhancing or filtering these edges or boundaries. Yajima, on the other hand, teaches the use of edge enhancement for the purpose of clearly defining the borders of a line (Yajima col. 2 lines 41-48). It would have been obvious to one reasonably skilled in the art at the time of the invention to modify Stavely's preprocessing method by enhancing edges in addition to detecting them. Such a modification would have allowed for the boundaries of the defective portions to be more clearly defined and recognizable.

With regard to claim 3, Stavely discloses that the image on the film is sequentially read on a plane basis (see figure 1).

With regard to claims 5 and 8, Stavely further discloses producing flag information which indicates the presence or absence of the defect on a pixel unit basis from the defective image (Stavely col. 4 lines 21-24: the defect signature information disclosed in stavely is analogous to the claimed flag information because both indicates the presence or absence of a defect).

With regard to claims 6 and 9, Stavely discloses that the defective image is photoelectrically read using infrared light (Stavely col. 4 lines 27-28)

With regard to claims 4 and 10, Stavely discloses that the defective image is evaluated to obtain an evaluated result (Stavely col. 4 lines 21-24). The image of surface defects from the infrared image as disclosed in Stavely is analogous to the evaluated result as recited in the claim. With respect to the further limitation recited in the claim that preprocessing and blemish elimination processing are stopped in accordance with the evaluated result, Stavely discloses that the image of surface defects, which is derived from the infrared image, is used in the blemish elimination processing (Stavely col. 4 lines 21-24). Since the image of surface defects, which is analogous to the

Art Unit: 2621

evaluated result as recited in the claim, is used to perform the blemish elimination processing, it follows that the preprocessing and blemish elimination processing are stopped in accordance with the evaluated result. Therefore, this further limitation is inherent in the teachings of Stavely

With regard to claims 2 and 11, Stavely further discloses that preprocessing is finished by the time the actual image is obtained (Stavely col. 4 lines 24-25: The reference describes that the order of scan A and scan B is not important. Thus, Stavely discloses performing Scan B before Scan A. In this case, the preprocessing of Scan B (the defective image) would be completed by the time Scan A (the actual image) is obtained.

With regard to claims 12 and 13, Stavely further discloses that, following the blemish elimination processing, the actual image is an image without blemishes (see generally Stavely col. 1 – col. 14).

With regard to claims 15, 16 and 20, Stavely discloses that preprocessing is performed during or before the image on the film is fine scanned by visible light (Stavely col. 4 lines 24-25: Again, the reference describes both simultaneous scanning of the two images (i.e. preprocessing is performed during) and sequential scanning of the two images in either order (i.e. preprocessing is performed before).

Referring to claims 14 and 19, the combination of Stavely and Yajima further disclose that the edge enhancement method enhances the image of an edge (Yajima col. 2 lines 41-48) corresponding to a defective portion (Stavely col. 5 lines 60-65), emphasizing the boundary (Yajima col. 2 line 42 and Stavely col. 5 line 62), and defining the position of the defect of the defective image (Stavely col. 4 line 23). This edge enhanced image data is binary coded (Yajima col. 3 lines 56-57).

Referring to claims 17 and 18, Stavely further discloses that the evaluated result is a result on whether image data which is smaller than a given threshold value is present before performing the preprocessing (Stavely col. 10 lines 54-62). If the image data is smaller than the threshold value, Stavely discloses that blemish elimination processing is not needed (Stavely col. 10 lines 54-62).

Regarding claims 21 and 22, the limitations of these claims have been addressed with respect to claim 1 above.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2621

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick L Edwards whose telephone number is (571) 272-7390. The examiner can normally be reached on 8:30am - 5:00pm M-F.

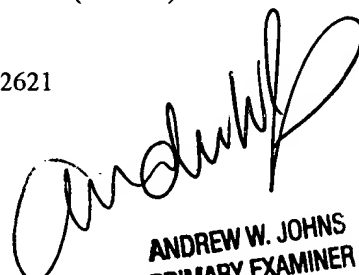
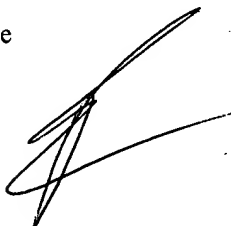
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joe Mancuso can be reached on (571) 272-7695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patrick L Edwards

Art Unit 2621

ple



ANDREW W. JOHNS
PRIMARY EXAMINER